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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Jeffry Harlow Loucks

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WAGNER, MURABITO & HAO LLP
Two North Market Street, Third Floor
San Jose, CA 95113

EXAMINER

TO, JENNIFER N

ART UNIT

PAPER NUMBER

2127

DATE MAILED: 01/25/2005

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/965,374

Applicant(s)

LOUCKS, JEFFRY HARLOW

Examiner

Jennifer N. To

Art Unit

2127

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

1. Claims 1-29 are presenting for examination.
2. It is noted that although the present application does contain line numbers in the specification and claims, the line numbers in the claims do not correspond to the preferred format. The preferred format is to number each line of every claim, with each claim beginning with line 1. For ease of reference by both the Examiner and Applicant all future correspondence should include the recommended line numbering.
3. The abstract of the disclosure is objected to because it is exceed 150 words in length. Correction is required. See MPEP § 608.01(b).

Claim Objections

4. Claim 26 is objected to because there is a typographical error in which the term "comprising" appeared one after another. Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter in which the applicant regards as his invention.

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6. Claims 1-9, 16-22, and 26-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. The following terms lack proper antecedent basis:

i. said service – claims 2, 4-7, 17, and 20-22;

b. The claim language in the following claims is not clearly understood:

i. as per claim 1, lines 8-9, it is uncertain whether “a registered service” refers to “at least one registered service” in line 3 or other register services (i.e. if they are the same, “said or the” must be used). Line 10, it is not clearly understood how “ranking said registered service” can be done since only one registered service there is. Line 11, it is unclear exactly what included in “the requirements”. It is suggested that more explanation need to be provided.

ii. as per claim 26, the phrase “being static in definition” render the claim unclear, indefinite and/or vague.

iii. as per claim 29, it is unclear exactly how is “service manager actively discovering”? It is suggest that more detail need to be provided.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1, 3, 4-8, 10, 12-14, 16, 18-22, and 26-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reiffin (U.S. Patent No. 6330583) in view of Waldron (U.S. Patent No. 6098090).
9. As per claims 1 and 10, Reiffin teaches the invention substantially as claimed including:
 - a background task registering at least one registered service (col. 4, lines 26-35),
 - said background task invoked by a kernel of said computer operating system in a dedicated pre-assigned time slice, said computer operating system comprising
 - said background task and a foreground task (abstract, lines 4-6), said
 - background task being scheduled independent from the operation of said
 - foreground task (abstract, lines 6-11; fig. 3; col. 4, lines 24-32), said background
 - task for providing an execution presence and a data presence to a registered
 - service (col. 4, lines 41-66).
10. Reiffin fail to teach that the registered service is ranked and schedule the registered services in said dedicated pre-assigned time slice.

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11. Waldron teaches that the registered service is ranked (fig. 2; col. 5, lines 16-43); and schedule the registered services in said dedicated pre-assigned time slice (col. 5, lines 8-12).

12. It would have been obvious to one of an ordinary skill in the art at the time the invention was made, to have combined the teaching of Reiffin and Waldron because Waldron's ranking the tasks and scheduling services in a pre-assigned time slice would improve the efficiency in Reiffin's system by allowing task having higher priority to run first in a timely manner (col. 2, lines 40-46 of Waldron).

13. As per claims 3 and 12, Reiffin teaches wherein said computer system is a portable electronic device (col. 3, lines 57-59).

14. As per claims 4 and 13, Reiffin and Waldron did not specifically teach that the data presence is an A5-based global variable context. However Waldron disclosed the resources allocation in which data presence is one of the resources (col. 5, line 10). It would have been obvious to one of an ordinary skill in the art at the time the invention was made to have included A5-based as the data presence type in Reiffin and Waldron's system because A5-based is known as one of the common used data in the art.

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15. As per claim 5, Reiffin teaches wherein said service is a system related activity (col. 4, lines 33-40).

16. As per claim 6, Reiffin teaches wherein said service is an interrupt-related activity (col. 4, lines 5-13).

17. As per claim 7, Reiffin teaches wherein said service is a background-related activity (col. 5, lines 3-8).

18. As per claims 8 and 14 Reiffin further teaches the step of periodically repeating said steps a) through c) (col. 6, lines 19-23).

19. As per claim 16, Reiffin teaches the invention substantially as claimed in claim 1, further including a processor coupled to a bus (col. 3, lines 64-67); a memory unit coupled to said bus having stored therein an operating system executed by said processor and a background task executed by said processor (col. 4, lines 14-19);

20. As per claims 18, 19, 20, 21 and 22, they are rejected based on claims 1, 3-7, and 16.

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21. Claims 2, 9, 11, 15, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reiffin (U.S. Patent No. 6330583) in view of Waldron (U.S. Patent No. 6021425), as applied to claims 1, 10, and 16, and in further view of Burns (U.S. Patent No. 6098090).

22. As per claims 2 and 11, Reiffin and Waldron do not specifically teach that the background task searching for at least one said service associated therewith.

However Burns teaches the step of said background task searching for at least one said service associated therewith (col. 4, lines 50-62).

23. It would have been obvious to one of an ordinary skill in the art at the time the invention was made, to have combined the teaching of Reiffin, Waldron, and Burns because Burns's searching step would improve the integrity of Reiffin and Waldron's system by having only the associated service (Burns col. 1, lines 43-45).

24. As per claims 9 and 15, Burns teaches the steps of periodically repeating said step of searching for at least one service associated therewith (col. 3, lines 42-56 and col. 4, lines 50-62).

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25. As per claim 17, Burns teaches wherein said background task further performs the step of searching for at least one said service associated with said background task (col. 4, lines 50-62).

26. As per claim 26, Reiffin teaches the invention substantially as claimed including a kernel of an operating system scheduling a plurality of tasks for execution with respective time slices (col. 4, lines 33-36).

27. Reiffin fail to teach that a plurality of applications dynamically registering and scheduling these applications based in a priority.

28. Waldron teaches that a plurality of applications dynamically registering (col. 6, lines 27-34), and scheduling these applications based in a priority (col.5, lines 2-8).

29. As per claim 27, Reiffin teaches that a plurality of applications comprise a system service, an interrupt service and a background service (col. 4, lines 3-40).

30. As per claim 28, Reiffin teaches that computer system is a handheld computer system (col. 3, lines 57-59).

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31. As per claim 29, Waldron teaches that service manger actively discovering a plurality of applications based on registration information associated therewith (col. 6, lines 46-61)

32. Claims 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reiffin (U.S. Patent No. 6330583) in view of Burns (U.S. Patent No. 6098090).

33. As per claim 23, Reiffin teaches the invention substantially as claimed including cycling through a set of pre-assigned time slices to schedule a set of tasks comprising a background task and a foreground task, each of said tasks assigned to one of said time slices wherein scheduling of said background task is independent from the scheduling of said foreground task (col. 2, lines 22-33 and col. 4, lines 33-40).

34. Reiffin fail to teach that the set of registered services may be dynamically updated, and service manager allocating a data presence to each of set registered services.

35. However Burn teaches that the set of registered services may be dynamically updated (col. 2, lines 5-19), and service manager allocating a data presence to each of set registered services (col. 10, line 67; and col. 11, lines 1-13).

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36. It would have been obvious to one of an ordinary skill in the art at the time the invention was made, to have combined the teaching of Reiffin, and Burns because Burns's dynamically updating registered services and allocating data presence of registered services would improve the integrity of Reiffin's system by eliminating task switching among background process and minimizing the amount of system resources required to run background tasks (col. 1, lines 60-64 of Burns).

37. As per claim 24, Reiffin teaches wherein said computer system is a portable electronic device (col. 3, lines 57-59).

38. As per claim 25, it is rejected based on claims 4 and 23.

Conclusion

39. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Mathis (U.S. Patent No. 5490272) teaches the method for creating multithread time slices in a multitasking operating system.

Reiffin (U.S. patent No. 5694603) teaches preemptive multithreading.

Waldron, III (U.S. Patent No. 5428789) teaches method for optimizing user response time in a priority preemptive operating system.


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40. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer N. To whose telephone number is (571) 272-7212. The examiner can normally be reached on M-T 7AM-4: 30 PM, F 7AM-3: 30 PM.

41. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

42. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jennifer N To
Examiner
Art Unit 2127


MENG-AI T. AN
SUPERVISOR
ART UNIT 2127